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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,268	06/21/2001	Koji Takeguchi	100794-09745(FUJR 18.748)	6901
26304	7590	07/12/2006	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			PHILPOTT, JUSTIN M	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,268

Applicant(s)

TAKEGUCHI ET AL.

Examiner

Justin M. Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) 10-14 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20060515.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 23, 2006 has been entered.

Information Disclosure Statement

2. The information disclosure statement filed May 15, 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

3. As of the date of this office action, none of the references (comprising five Japanese patents and one Japanese office action) cited in the information disclosure statement filed May 15, 2006 have been included in the application file – either applicant has not provided copies of the references, or if provided, the references have not yet been scanned into the application file for Examiner's consideration at this time.

Response to Arguments

4. Applicant's arguments filed June 23, 2006 have been fully considered but they are not persuasive. Specifically, applicant's general assertion (page 11) that the newly amended claims are allowable is not persuasive. In particular, the newly added claim limitations are taught by the previously cited art as discussed in the following office action. Thus, applicant's argument is not persuasive.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,461,622 to Bleickardt et al. in view of U.S. Patent No. 6,253,247 to Bhaskar et al.

Regarding claims 1, 8 and 17, Bleickardt teaches a transmission system for controlling the transmission of a concatenation signal via a path, the system comprising: a sending apparatus (e.g., 200, see FIG. 2) including: signal dividing means (e.g., via combination of 205, 208, 211-213, 216-218) for dividing the concatenation signal (e.g., 201) to generate a plurality of divided signals (e.g., 202-204) which are pseudo concatenation signals having a SONET or SDH multiplexed interface (e.g., STS-3c, see col. 2, lines 44-61 and col. 7, line 66 – col. 8, line 12), the bit rate (e.g., 149.760 Mb/s, see col. 8, lines 3-12) of which is lower than that of the original concatenation signal according to a bit rate available for transmission (e.g., super-rate signal at a

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rate greater than the payload rate of the STS-3c signal, see col. 8, lines 3-12); guarantee information adding means (e.g., overhead inserters 217) for adding guarantee information (e.g., Stuffing Indicator and overhead bytes, see col. 4, line 30 – col. 6, line 5), for guaranteeing the continuity of the divided signals (e.g., see col. 6, lines 31-65 regarding Stuffing Indicator and overhead bytes extracted and evaluated to provide proper destuffing and alignment), to each of the divided signals to generate transmission signals; and signal sending means (e.g., 218) for sending the transmission signals; and a receiving apparatus (e.g., 500 in FIG. 5) including: a signal receiving means (e.g., via combination of 504-508) for receiving the transmission signals (e.g., 501); and signal restoring means (e.g., via combination of 509-511) for restoring the original concatenation signal by constructing the divided signals (e.g., at output of 511) on the basis of the guarantee information (e.g., see col. 6, line 16 – col. 7, line 48).

However, Bleickardt may not specifically disclose assigning the transmission signals to transmission lines of a suitable capacity and sending them to one address in parallel via a plurality of transmission lines.

Bhaskar also teaches an optical transmission system (e.g., see abstract and col. 4, lines 49-58 regarding optical fiber transmission), and further, specifically teaches assigning transmission signals (e.g., see col. 2, lines 45-57 regarding “user’s data is transmitted”, implicitly transmitted in transmission signals) to transmission lines (e.g., see col. 5, lines 12-24 regarding assigning transmission lines to users) to have capacity that is suitable for service contents (e.g., see col. 5, lines 12-24 regarding transmission lines having particular bandwidth allocations), and sending transmission signals to one address (e.g., a single IP address, see col. 6, lines 28-47, and specifically line 44) in parallel (e.g., see col. 5, lines 59-67 regarding “parallel transmission”) via

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a plurality of transmission lines (e.g., see col. 6, lines 28-47 regarding multiple connections and col. 4, lines 28-37 regarding several communication lines), on which the bit rate is implicitly limited (e.g., according to the bit rate limit of the particular communication form/technology, such as 28.8kbps, ISDN, ADSL and xDSL as recited in col. 4, lines 49-58). The teachings of Bhaskar also provide a transmission system with increased throughput with reduced costs (e.g., see col. 2, lines 45-49 and col. 3, lines 19-23). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the optical transmission system teachings of Bhaskar to the optical transmission system of Bleickardt in order to provide the transmission system with increased throughput with reduced costs.

Additionally, regarding claim 17, in a previous office action the Examiner took official notice that the limitations previously recited in claims 6 and 7, and now similarly presently recited in claim 17, are well known in the art. That is, it is well known in the art of multiplex communications to overlap portions of transmitted signals whereby delay correction is performed at receiving means. In applicant's responses of June 17, 2004, February 2, 2005, March 4, 2005, and September 6, 2005, applicant has not traversed the Examiner's assertion of official notice or applicant's traverse is not adequate. In accordance with MPEP 2144.03(C), the aforementioned limitations with respect to claims 6 and 7 comprise well-known art and are taken to be admitted prior art. Regarding claim 17, for similar reasons at the time of the invention it would have been obvious to one of ordinary skill in the art to overlap a portion of a divided signal and delay a portion of another signal prior to sending in the system of Bleickardt in view of Bhaskar in view of Cioffi since such an implementation is well known in the art of multiplex communications.

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Regarding claim 2, Bleickardt teaches the guarantee information adding means adds at least one of information regarding the type of the concatenation signal (e.g., see col. 4, lines 30-59 regarding the number of fixed stuffing bytes which indicate a certain signal rate), the frame number of the concatenation signal (e.g., see col. 5, lines 45-64 regarding frame reference bytes), and a division number (e.g., Stuffing Indicator byte, see col. 4, line 22 – col. 5, line 7) at the time of dividing the concatenation signal to the divided signal as the guarantee information.

Regarding claim 3, Bleickardt teaches the guarantee information adding means adds the guarantee information in empty bytes of a path overhead (e.g., via path overhead generator, see col. 5, lines 45-64) for the divided signal.

7. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bleickardt in view of Bhaskar, further in view of U.S. Patent No. 6,473,438 to Cioffi et al.

Regarding claim 4, Bleickardt in view of Bhaskar teaches the transmission system discussed above regarding claim 1, however, may not specifically disclose the receiving apparatus further includes delay information notifying means for giving the sending apparatus delay information regarding delays which have occurred at the time of receiving the transmission signals.

Cioffi also teaches a transmission system for controlling the transmission of a multiplexed signal via a path, and further, Cioffi teaches providing improved synchronization upon experiencing delays. Specifically, Cioffi teaches a receiving apparatus (e.g., central unit 10) further includes delay information notifying means (e.g., delay correction information, see col. 15, line 62 – col. 16, line 20) for giving a sending apparatus (e.g., first remote unit 15) delay

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information regarding delays which have occurred at the time of receiving the transmission signals. Cioffi further discloses that the teachings are applicable to a wide variety of data transmission systems including systems utilizing fiber for transmission path means (e.g., see col. 3, lines 10-16; see also col. 5, lines 48-58 regarding additional applicability). The delay correction information teachings of Cioffi provides improved synchronization for a plurality of signals transmitted along a common path whereby a receiving apparatus (e.g., 10) can accurately coordinate and reliably interpret a plurality of multiplexed signals having various delays (e.g., see col. 2, lines 45-51; see also col. 2, line 65 – col. 5, line 58). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the delay correction information teachings of Cioffi to the transmission system of Bleickardt in view of Bhaskar in order to provide improved synchronization for a plurality of signals transmitted along a common path whereby a receiving apparatus can accurately coordinate and reliably interpret a plurality of multiplexed signals having various delays (e.g., see col. 2, lines 45-51).

Regarding claim 5, Cioffi further teaches, on the basis of delay information, the signal sending means (e.g., at remote unit) sets the bit rate (e.g., data rate, see col. 4, line 64 – col. 5, line 6) of each transmission signal variable and makes delay correction (e.g., see col. 3, lines 25-39). As discussed above, the delay correction information teachings of Cioffi provides improved synchronization for a plurality of signals transmitted along a common path whereby a receiving apparatus (e.g., 10) can accurately coordinate and reliably interpret a plurality of multiplexed signals having various delays (e.g., see col. 2, lines 45-51; see also col. 2, line 65 – col. 5, line 58). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the delay correction information teachings of Cioffi to the transmission system of

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Bleickardt in view of Bhaskar in order to provide improved synchronization for a plurality of signals transmitted along a common path whereby a receiving apparatus can accurately coordinate and reliably interpret a plurality of multiplexed signals having various delays (e.g., see col. 2, lines 45-51).

Regarding claims 6 and 7, these claims were rejected in a previous office action by the Examiner taking official notice that the limitations recited in these claims are well known in the art. That is, it is well known in the art of multiplex communications to overlap portions of transmitted signals whereby delay correction is performed at receiving means. In applicant's responses of June 17, 2004, February 2, 2005, March 4, 2005, and September 6, 2005, applicant has not traversed the Examiner's assertion of official notice or applicant's traverse is not adequate. Therefore, in accordance with MPEP 2144.03(C), the limitations recited in these claims comprise well-known art and are taken to be admitted prior art. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to overlap portions of transmitted signals in the system of Bleickardt in view of Bhaskar in view of Cioffi whereby delay correction is performed at receiving means since such an implementation is well known in the art of multiplex communications.

Allowable Subject Matter

8. Claims 15 and 16 are allowed.
9. The following is an examiner's statement of reasons for allowance:

Claim 15 recites a system similar to that described in claim 1, however, with the addition of a receiving apparatus that includes particular delay information notifying means (as recited in

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lines 18-28), signal sending means that calculates bit rates of individual signals (as recited in lines 21-22), and signal dividing means that divides the concatenation signal to meet particular conditions (as recited in lines 23-28); and

Claim 16 recites a system similar to that described in claim 1, however, with the addition of a receiving apparatus that includes particular delay information notifying means (as recited in lines 18-28), signal sending means that calculates bit rates of individual signals (as recited in lines 21-22), and wherein the bit rates are given by a particular equation based upon the bit rate of the first divided signal time multiplied by the time distance from a receiving start time of the first divided signal to a receiving end time and divided by the difference of the aforementioned time and the delay information, wherein the delay information is a value for a difference of the first end time and a receiving end time of a second divided signal arriving later (as recited in lines 23-28); limitations which were not found in a search of related prior art.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571.272.3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Justin M. Philpott